ACC.11
60th Annual Scientific Session & Expo

E988
JACC April 5, 2011
Volume 57, Issue 14

MYOCARDIAL ISCHEMIA AND INFARCTION

IMPACT OF INTRACORONARY ADMINISTRATION OF NITROPRUSSIDE VS. NITROGLYCERINE BEFORE BALLOON DILATATION ON SLOW REFLOW DURING PERCUTANEOUS CORONARY INTERVENTION IN PATIENTS WITH ACUTE ST ELEVATION MYOCARDIAL INFARCTION

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Sunday, April 03, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Acute Myocardial Infarction -- Pharmacological, Stem Cell and other Adjunctive Therapies
Abstract Category: 3. Acute Myocardial Infarction—Therapy
Session-Poster Board Number: 1037-315

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Background: Retrospective data have shown that selective intracoronary administration of Nitroprusside prior to percutaneous coronary intervention (PCI) is safe, prevents no or slow reflows, and improves reperfusion of the infarcted myocardium for acute myocardial infarction (AMI) . There is paucity of prospective data regarding the usefulness of this therapy which we analysed.

Methods: We randomly assigned 87 consecutive patients with AMI to perform PCI with Nitroprusside (44 patients) or with Nitroglycerine(43 patients).Nitroglycerine(200µg) & Nitroprusside (120 µg) was selectively administered through the drug delivery catheter into the distal coronary artery to reach the target lesion before balloon dilatation. Clinical and angiographic data, as well as in-hospital outcomes, of Nitroprusside group were compared with Nitroglycerine group.

Results: There were no significant differences in the baseline characteristics between the 2 groups. Compared to the Nitroglycerine group, the Nitroprusside group had less slow reflow during the procedure (19% vs. 36%, p=0.0442); a similar final TIMI flow grade (III:II:I:0 = 31:2:1:0 vs. 29:4:2:0, p=0.5524); a better blush grade (III:II:I:0 = 28:5:1:0 vs. 20:8:5:2, p=0.0483); and a better corrected TIMI coronary frame count (31.1±10.0 vs. 45.1±20.1, p=0.0008). There were no particular complications with Nitroprusside use.

Conclusions: The selective intracoronary administration of Nitroprusside prior to PCI is safe and well tolerated, prevents no or slow reflows, and improves reperfusion of the infarcted myocardium in AMI